OPW FUEL MANAGEMENT SYSTEMS
A DOVER COMPANY

Aqueous Ethanol Float Sensor

First Line of Defense Against Phase Separation

OPW's AEF Sensor monitors in-tank water levels and product density to deliver superior real-time detection of aqueous ethanol and prevent false phase separation alarms.

The Aqueous Ethanol Float Sensor

The Aqueous Ethanol Float Sensor provides early detection of unstable water levels inside tanks. Unlike competing aqueous ethanol detection devices, OPW's AEF sensor's density readings are temperature-corrected, which prevents false phase separation alarms. Programmable thresholds allow corrective actions to be deployed before phase separation — and costly inventory losses — occur.

Applications

- Provides early detection of water intrusion by sensing water level changes (at 5/16 inch) and product density fluctuations at bottom of the tank
- Compatible with rigid probe applications
- Monitors ethanol blends ranging from E10 to E85
- Program tank gauge alarms to activate at specific density thresholds

PRECISE

AEF Sensor detects water level changes and product density changes almost four times earlier than competing detection devices and eliminates false phase separation alarms

RESPONSIBLE

Preventing fuel contamination helps petroleum marketers minimize financial losses and maintain customer loyalty

FLEXIBLE

Programmable density thresholds enable corrective actions to be deployed in a time frame that provides maximum operational uptime

COMPATIBLE

The AEF Sensor, which monitors ethanol bends from E10 to E85, seamlessly integrates with OPW tank gauging equipment

Contact your OPW representative to learn more about OPW's industry-leading AEF Sensor today!

Phone: (708) 485-4200 • Fax: (708) 485-4630 • 6900 Santa Fe Drive • Hodgkins, Illinois USA 60525 • www.opwglobal.com

OPW
A DOVER COMPANY

Leading The Way in Fluid Handling Solutions Worldwide

www.opwglobal.com

Aqueous Ethanol Float Sensor

Benefits

- OPW's AEF Sensor detects water level changes and product density changes at the bottom of storage tanks sooner than competing water-detection devices
- Provides real-time fuel density measurements
- Unlike competing aqueous ethanol floats, OPW's AEF sensor net-corrects for thermal changes in the tank that frequently occur during deliveries, eliminating false phase separation alarms
- Triggers a warning and then an alarm to accurately and clearly communicate current tank conditions
- Programmable density thresholds empower site managers to deploy corrective actions before phase separation occurs
- Registers density changes in E85 even if water is completely suspended in the fuel and no water has collected at the bottom of the tank
- Easily installs on new and existing in-tank OPW magnetostrictive probes
- Fits through the same 2-inch (5 cm) opening in the tank that's used by the probe

Features

- Displays temperature-corrected density readings in kg/m^3, g/cc or API
- AEF Sensor calibrates in-tank product density to deliver the most accurate density measurement readings
- AEF Sensor monitors ethanol blends ranging from E10 to E85
- Programmable alarm settings
- System alarms when sensor detects that the E10 density has exceeded 30 kg/m^3 or that E85 density has exceeded 15kg/m^3

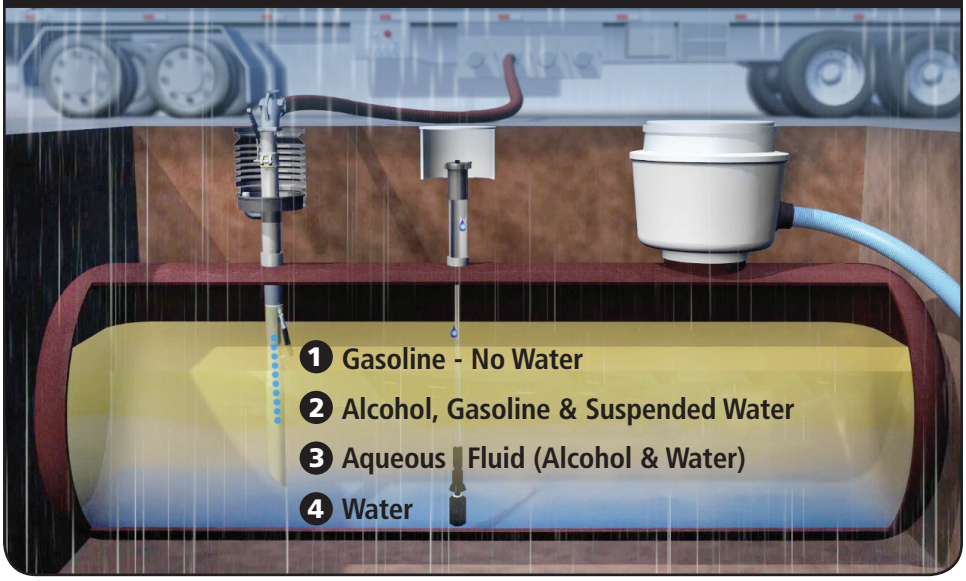
Specifications

- Materials: Nitrophyl, Buna, stainless steel, plastic/metal composite magnet
- Resolution: 0.0127mm (0.0005 inch)
- Operating Temperature Range: -40°C to -60°C (-40°F to 140°F)
- Density Range: 720 kg/m^3 to 1,000 kg/m^3
- Accuracy: +/- 1%
- Dimensions: 1.95 inch diameter x 8.87 inches long (4.95 cm diameter x 22.53 cm)

How Water Sabotages Fuel Inventory Through Phase Separation

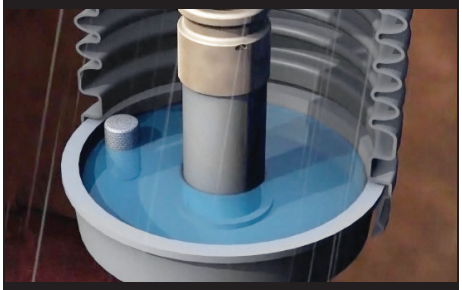
Water is the enemy of fuel. It takes very little water to ruin inventory.

In 10,000 gallons of E10, it takes as little as 40 gallons of water to cause phase separation, a condition when the ethanol becomes over-saturated and can no longer be suspended in the gasoline. This can lead to four distinct layers of inventory:



Water can enter tanks in two ways, which are common and difficult to prevent:

1 The spill container during fuel delivery



2 A bad riser cap gasket or service fitting

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